LOUISIANA TECHNOLOGY INNOVATIONS FUND
PROGRESS REPORT

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I Agency

Laboratory For Information Technology and Spatial Analysis
College of Urban And Public Affairs
University of New Orleans

II Project Title

Census TIGER File Verification Via High Resolution Imagery

III Project Leader

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IV Description Of The Project

The accuracy of the 2000 Census is of great importance to Louisiana. Missed residents will cost the state $1,000 per year in lost revenue. The Census' TIGER files are an integral part of Census accuracy. LITSA is employing high resolution satellite imagery to verify TIGER's completeness in mapping residential areas by matching georeferenced images with current TIGER releases. The lab will identify anomalies and bring them to the attention of local authorities.

V. Project Status

A. Brief Summary

LITSA activities with respect to TIGER verification fall into the categories of training , data acquisition, equipment acquisition, software acquisition, data analysis, and map production.

B. Accomplishments

Training

Laboratory Director John Wildgen has taken 16 hours of formal instruction in San Diego in digital photogrammetry and environmental analysis. Graduate student Victoria Butterworth has completed 40 hours of instruction in ArcInfo GIS in St. Paul at Environmental Science Research Institute (ESRI) . Graduate student Lynn Dupont has completed 40 hours of instruction in remote sensing at ERDAS headquarters in Atlanta. This has greatly enhanced our knowledge of the latest trends in terrestrial and remote-sensed data bases, and analytical techniques.

Data Acquisition

The TIGER verification project has acquired TIGER 95, TIGER 97, and has ordered TIGER 99. TIGER 2000 will be available next years. We have also ordered SPIN-2 imagery for the study area. The imagery data will arrive in phases. The first data are expected in the first week of September. We are also using USGS 7.5 minute quad sheets in digital raster graphic (DRG) format to georeference the imagery and provide familiar visual cues for viewing the mapping products.

Equipment Acquisition

Equipment has arrived in good order. In the lab's first phase two NT workstations and a large format plotter were networked. A UNIX server and 100GB RAID disk array are out for bid.

Software Acquisition.

The major software packages serving this project include ArcInfo, ArcView, ER-Mapper, and S+. Until mid autumn we will use current, but soon to be upgraded, releases of our ESRI family software. ER-Mapper, which will serve as our image processer, is expected in the last week of August.

Data Analysis

At this juncture we have confronted and solved a major data analytic question, the nagging issue of projections. Projections are mathematical models used to transfer global positions to flap map positions. They are hard to discriminate visually, but differences become quite apparent when overlaying two maps. We are going to work with the Census Bureau's standard post-1995 datum, NAD83, and UTM - 15 as a projection. This will make us adjust the USGS DRGs about 200 meters north so. This is because the DRGs are in the older NAD27.

C. Problems Encountered

Certainly the biggest disappointment of this project was the failure of the IKONOS satellite to deploy last spring. The booster lifted off successfully and all three stages of the rocket worked as designed. However the shroud covering the satellite failed to open. This meant that the lab had to use its backup data source, SPIN-2. The sliver lining in this cloud is the overall good quality of SPIN imagery.

D. Major Milestones

We are somewhat ahead of schedule, in that equipment and software are up and running, and the data are beginning to run downstream. The next adventures are the employment of the Russian data, and the posting of images to the website. I have found 9.1 GB of disk space on the lab's existing workstation, so we will not await the new workstation's arrival. Data will be posted as soon as it is ready.

VI Cost Versus Budget*

Category	Budgeted	Actual	Projected Surplus
Equipment	$75,700	$8,000	0
Software	$50,000	$9,000	0
Data	$300,000	$270,000	0
Professional	NA	NA	NA
Other (Training)	$24,000	$8,000	0
Total	$449,700	$295,000	0

* This table is provisional. It represents requisitions and outstanding orders.

VII Itemized Expenses